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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,804	02/06/2002	Peter Heinrich	178B/50884	4465

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EXAMINER

PIERCE, JEREMY R

ART UNIT PAPER NUMBER

1771

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,804

Applicant(s)

HEINRICH ET AL.

Examiner

Jeremy R. Pierce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9 and 10 recite "the particle filtering media is present in" a certain amount. However, claim 1 recite a first and a second particle filtering medium. It is unclear whether the basis weights recited in claims 9 and 10 are directed to the first particle filtering medium, the second particle filtering medium, or both of them in combination.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 7, 8, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Weiss et al. (U.S. Patent No. 4,883,052).

Weiss et al. disclose a multi-layer filter for a protective breathing mask. The particle filter is in the form of a triple-layer composite comprising two non-woven layers

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sandwiching a middle layer of polycarbonate microfibers (column 7, lines 65-68).

Adjacent this three-layer composite is a layer of adsorber filter that comprises open-cell foam and a carrier means such as activated carbon (column 8, lines 8-65). With regard to claim 8, zeolites may be blended with the activated carbon (column 8, lines 62-65).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al. in view of Singer et al. (U.S. Patent No. 5,817,584).

Weiss et al. do not disclose the structure of the two outer layers of nonwoven material. Singer et al. teach that filters for breathing masks comprising three-layers are typically made from spunbonded/meltblown/spunbonded composite fabrics (column 1, lines 16-25). It would have been obvious to one having ordinary skill in the art to make the two outer layers of nonwoven fabric identical to each other, such as in a spunbonded configuration, in order to provide a structurally sound and typical three-layer filter laminate in the art of face masks, as taught by Singer et al. With regard to claims 5 and 6, Singer et al. disclose the two outer spunbonded layers to be preferably bi-component to enable through-air bonding (column 5, lines 1-3). The polymers useful in making the bi-component fibers include polypropylene, polycarbonate, polyethylene

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terephthalate, and polyamide (column 5, lines 5-10). With regard to claim 9, Singer et al. disclose the weight of the SMS laminates to be up to 400 grams per square meter (column 4, line 58). With regard to claim 11, Singer et al. disclose that breathing masks are often made into a pleated shape to increase filtration (column 1, lines 48-50). It would have been obvious to one having ordinary skill in the art to pleat the breathing mask of Weiss et al. in order to increase filtration. Installing the material into a filter cassette is a recitation of an intended use, and is not given any patentable weight.

7. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al. in view of Klaase et al. (U.S. Patent No. 4,588,537).

Weiss et al. do not teach the basis weight for the two outer nonwoven layers. Klaase et al. teach that adjustment in basis weight is a result effective variable that can effect filtering performance (column 8, lines 26-28) and also disclose electret filters with basis weights up to 450 grams per square meter (column 10, lines 21-22). It would have been obvious to one having ordinary skill in the art to provide the two outer fibrous layers of Weiss et al. with basis weights of between 400 and 605 grams per square meter in order to obtain desired filtration performance, resiliency, and moldability of the filter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jeremy R. Pierce
Examiner
Art Unit 1771
July 24, 2003


ELIZABETH M. COLE
PRIMARY EXAMINER